2. Compression

Program Name: Compression.java Input File: compression.dat

Rachel has been given a text file by her professor with the task of compressing the contents without losing any data, a lossless algorithm. She has been informed in advance that the text will contain only alphanumeric characters. For example:

aaaa56666bmFfff

She has decided on using the following compression algorithm: Count the number of repeating characters, and place it before that character. The output for the above input would be

4a15461b1m1F3f

Your job is to produce the output according to Rachel's algorithm.

Input
The first line of input contains T, the number of test cases that follow. The subsequent lines will each hold a single test case where the length of the test case is N.

Output
For each test case, print the result of the compression process.
Note: It may be the case that the compression results in a lengthier string than the original.

Constraints
$1 <= T <= 100$
$0 <= N <= 1x10^3$

Example Input File
3
aaaa56666bmFfff
12121212
CCCCCCCssssssss

Example Output to Screen
4a15461b1m1F3f
11121111211121112
7C8s